

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number  
**WO 2005/040549 A1**

(51) International Patent Classification<sup>7</sup>: **E21B 33/13**

(21) International Application Number:  
PCT/EP2004/010848

(22) International Filing Date:  
27 September 2004 (27.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
03244274 20 October 2003 (20.10.2003) GB

(71) Applicant (for FR only): **SERVICES PETROLIERS  
SCHLUMBERGER** [FR/FR]; 42, rue Saint-Dominique,  
F-75007 Paris (FR).

(71) Applicant (for AT, AZ, CR, DE, DK, GB, IT, KP, KR, KZ,  
MX, NO, NZ, PL, RO, RU, TM, ZA only): **SCHLUM-  
BERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat  
83-89, NL-2514 JG The Hague (NL).

(71) Applicant (for GB, JP, NL only): **SCHLUMBERGER  
HOLDINGS LIMITED**; PO Box 71, Craigmuir Cham-  
bers, Road Town, Tortola (VG).

(71) Applicant (for CA only): **SCHLUMBERGER CANADA  
LIMITED** [CA/CA]; 525 - 3rd Avenue S.W., Calgary, Al-  
berta T2P OG4 (CA).

(71) Applicant (for all designated States except AT, AZ, CA, CR,  
DE, DK, FR, GB, IT, JP, KP, KR, KZ, MX, NL, NO, NZ, PL,  
RO, RU, TM, US, ZA): **SOFITECH N.V.** [BE/BE]; Rue de  
Stalle 140, B-1180 Brussels (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DROCHON, Bruno**  
[FR/FR]; 33 rue de la Baignade, F-93160 Noisy le Grand  
(FR). **JAMES, Simon** [GB/FR]; 6 rue du Moulin Fidel, Apt  
B77, F-92350 Le Plessis-Robinson (FR).

(74) Agent: **MENES, Catherine**; Etudes & Productions  
Schlumberger, 1, rue Henri Becquerel-BP 202, F-92142  
Clamart Cedex (FR).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: **CEMENTING COMPOSITION WITH CONTROLLED MECHANICAL PROPERTIES**

(57) Abstract: A cement composition for which the mechanical properties of the set cement can be controlled independently of the slurry density, both at high density (>16ppg) and at low density (<12ppg) comprises a trimodal blend of particulate materials present as fine, medium and coarse particulate size fractions, the particulate materials including cement, flexible particles, and a filler, characterized in that the cement comprises the fine particle size fraction, and the flexible particles and filler comprise the medium and large particle size fractions.

WO 2005/040549 A1